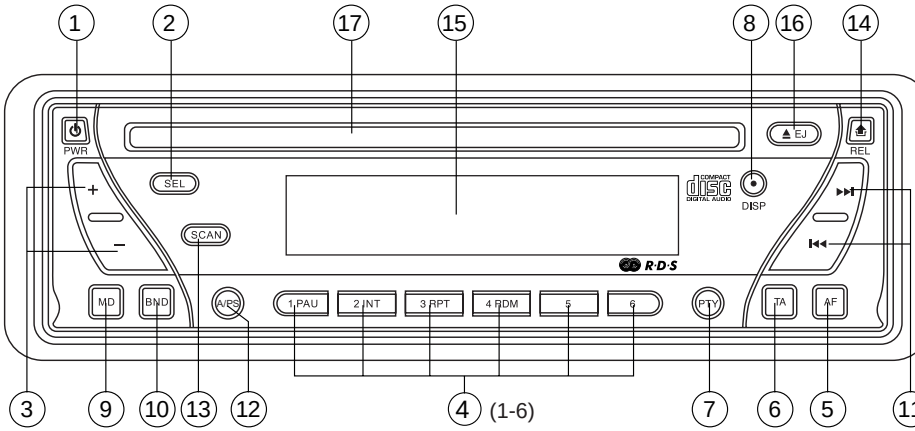
LOCATION OF PARTS AND CONTROLS

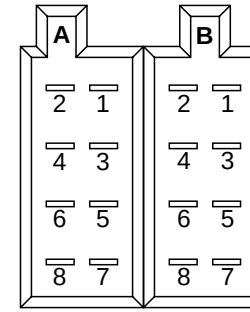


1. POWER ON/OFF **(PWR)**
2. FUNCTION SELECT BUTTON: BASS/TREBLE/BALANCE/FADER/TA SEEK/ MASK DPI/RETUNE/AUDIO DSP/LOUDNESS/ESP/BEEP/SEEK/STEREO/ LOCAL/VOL LAST **(SEL)**
3. VOL UP/VOL DOWN FOR BASS/TREBLE/BALANCE/FADER/TA SEEK/ MASK DPI/RETUNE/AUDIO DSP/LOUDNESS/ESP/BEEP/SEEK/STEREO/ LOCAL/VOL LAST **(+/-)**
4. PRESET STATIONS **(1,2,3,4,5,6)**
5. **'AF'** function (ALTERNATIVE FREQUENCIES)
6. **'TA'** function (TRAFFIC ANNOUNCEMENT)
7. **'PTY**' function (PROGRAM TYPE)
8. DISPLAY **(DISP)**
9. MODE BUTTON **(MD)**
10. BAND **(BND)**
11. AUTOMATIC OR MANUAL TUNING (FREQ UP ⏭ OR FREQ DOWN ⏮)
12. AUTO SEEK SEARCH TUNING **(A/PS)**
13. 'SCAN' AUTOMATIC TUNING CONTROL **(SCAN)**
14. PANEL RELEASE BUTTON (⏏)
15. LCD DISPLAY
16. CD EJECT BUTTON (⏏)
17. CD SLOT

ISO CONNECTOR

RCA Jack Line Out:
: Red (right)
: White (left)

RCA Jack Line In:
: Red (right)
: White (left)



CONNECTOR A

1.
2.
3.
4. MEMORY +12V
5. AUTO ANTENNA OUTPUT
6.
7. +12V (TO IGNITION KEY)
8. GROUND

Note: (connector A no. 7) must be connected by car ignition key in order to avoid that car battery becomes weak when the car will be not used for long period.

CONNECTOR B

1. REAR RIGHT SPEAKER (+)
2. REAR RIGHT SPEAKER (-)
3. FRONT RIGHT SPEAKER (+)
4. FRONT RIGHT SPEAKER (-)
5. FRONT LEFT SPEAKER (+)
6. FRONT LEFT SPEAKER (-)
7. REAR LEFT SPEAKER (+)
8. REAR LEFT SPEAKER (-)

Maintenance

FUSE REPLACEMENT

If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after the replacement, there may be an internal malfunction. In this case, consult your nearest repairing center.

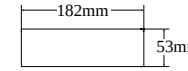
Warning

Use the specified amperage fuse for each lead. Use of a higher amperage fuse may cause serious damage.

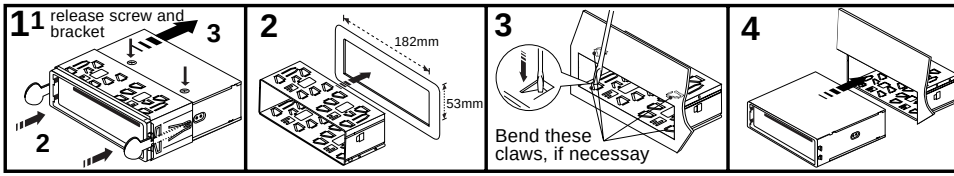
INSTALLATION

PRECAUTIONS

- Choose the mounting location carefully so that the unit will not interfere with the normal driving functions of the driver.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight or hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.
- Use only the supplied mounting hardware for a safe and secure installation.
- Be sure to remove the front panel before installing the unit.

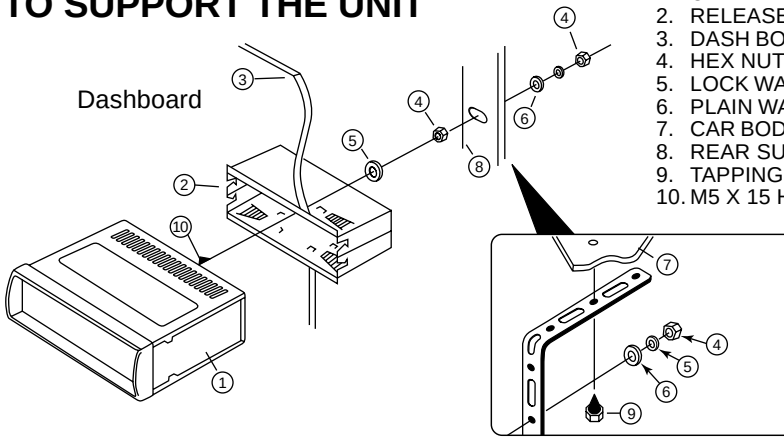


NOTE : Inclination angle for car radio installation must not exceed 30˚ otherwise the front panel will not open.



Note: Keep the release key in the safe place as you may need it in future to remove the unit from the car.

TO SUPPORT THE UNIT



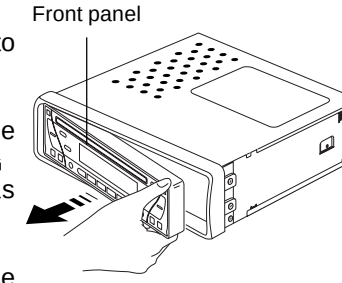
1. UNIT
2. RELEASE CASE
3. DASH BOARD
4. HEX NUT
5. LOCK WASHER
6. PLAIN WASHER
7. CAR BODY
8. REAR SUPPORT STRAP
9. TAPPING SCREW
10. M5 X 15 HEX BOLT

Detaching and attaching the front panel

The front panel of this unit can be detached in order to prevent the unit from being stolen.

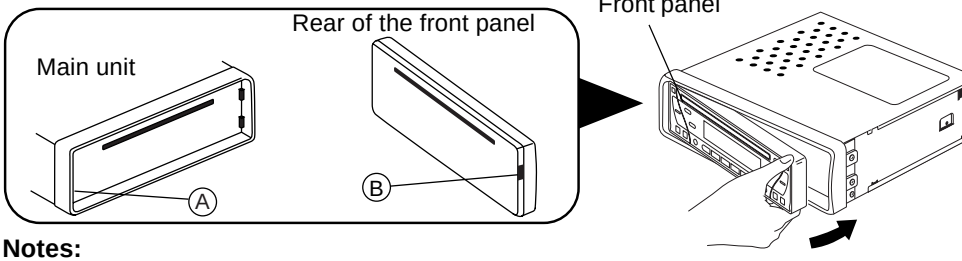
DETACHING THE FRONT PANEL

Before detaching the front panel, be sure to press the POWER OFF button first. Then press the button (14) ⏏ and detach the panel by pulling it towards you as illustrated.



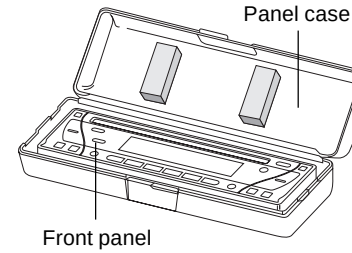
Note:

Be sure not to drop the panel when detaching it from the unit.



Notes:

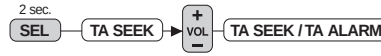
- Make sure that the front panel is the right way up when attaching it to the unit as it cannot be attached upside down.
- Do not press the front panel hard against the unit when attaching it. It can be easily attached by pressing it lightly against the unit.
- When you carry the front panel with you, put it in the supplied front panel case.
- Do not press hard or give excessive pressure to the display window of the front panel when attaching it to the unit.



1. **POWER ON/OFF (PWR)**
   By pressing this key, the unit is on and off.
   This unit is turned on by pressing any key.

2. **FUNCTION SELECT BUTTON: BASS/TREBLE/BALANCE/FADER / TA SEEK/MASK DPI/ RETUNE/AUDIO DSP/LOUDNESS/ESP/BEEP/SEEK/STEREO/LOCAL/VOL LAST (SEL)**
   When pressed short, it is activated as selecting mode of electric volume.
   VOL ---- BASS ---- TREB ---- BAL ---- FADER ---- VOL

   TA SEEK/TA ALARM
   When press the SEL button for more than 2 seconds, it is activated as selecting mode of these function.
   TA SEEK Mode or TA ALARM mode is selected by VOL + or VOL - button.



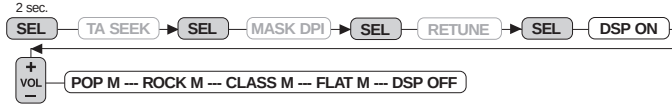
   - TA SEEK mode:
   When newly turned station does not receive TP information for 5 sec., the radio retunes to next station which has not the same station (PI) as the last station, but has the TP information. In TA seek mode, the current station can be changed to the completely different station because the unit searches TP station when the field strength of the current station is very weak, or the current station has no TP signal.
   - TA ALARM mode:
   Any automatic retune mode is not activated, just can hear Beep sound.

   MASK DPI
   When press the SEL button for more than 2 seconds, it is activated as selecting mode of these function.

   MASK DPI: masked only the AF which has different PI.
   MASK ALL: masked the AF which has different PI and NO RDS signal with field strength.

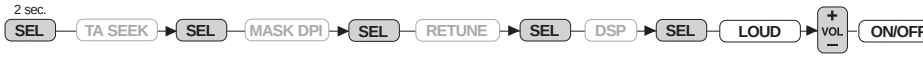
   RETUNE L / S CONTROLS (2)
   When press the SEL button for more than 2 seconds, it is activated as selecting Retune mode.
   RETUNE L: Select 90 seconds as the initial time of automatic TA search.
   RETUNE S: Select 30 seconds as initial time.

   AUDIO DSP CONTROLS
   When press the SEL button for more than 2 seconds, it is activated as selecting mode of these function.



   DSP can be selected by VOL UP and DOWN key.
   POP M---ROCK M---CLASS---FLAT M---DSP OFF

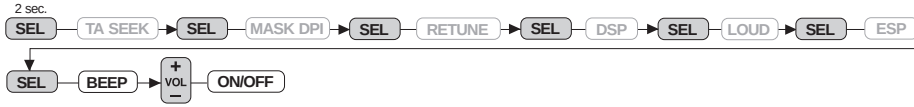
   LOUDNESS CONTROLS
   When press the SEL button for more than 2 seconds, it is activated as selecting mode of these function.



   LOUD ON/OFF mode is selected by VOL + and VOL -. The bass and treble response will be boosted.

ESP MODE (2)
When press the SEL button for more than 2 seconds, it is activated as 12 sec. or 45 sec. of ESP mode can be selected.

BEEP MODE
When press the SEL button for more than 2 seconds, it is activated as selecting mode of these function.

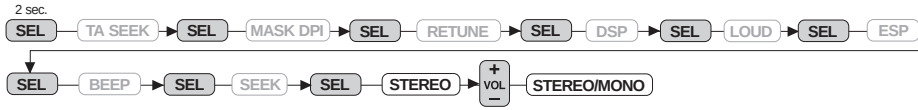


BEEP ON: BEEP sound can be heard from speaker when the buttons are pressed.

SEEK MODE
When press the SEL button for more than 2 seconds, it is activated as selecting mode of these function.

SEEK 1: When SEEK 1 mode is activated, AUTO SEEK SCAN is stopped when station is detected even user still push SEEK button.
SEEK 2: Auto SEEK SCAN is not stopped even station is detected if user push SEEK button. When release this SEEK button, then stop when station is detected.

STEREO/MONO
When press the SEL button for more than 2 seconds, it is activated as selecting mode of these function.



When FM stations are weak and are disturbed, listening can be improved by selecting MONO.

LOCAL/DX
When press the SEL button for more than 2 seconds, it is activated as selecting mode of these function.

“Local” position in areas with strong signals to let radio stop at only strong stations during manual tuning (LOC appears). Press to Distant position in areas with weak signals to listen to all stations.

VOL LAST/ADJUST
When press the SEL button for more than 2 seconds, it is activated as selecting mode of these function.

VOL LAST: The volume level which user adjust lately is selected whenever power is ON and OFF.
VOL ADJ: The initial volume level (user can adjust) is selected whenever power is ON and OFF

3. VOL UP/VOL DOWN FOR BASS/TREBLE/BALANCE/FADER (+/–)
By pressing these key, you can adjust VOL/BASS/TREB/BAL/FAD and select the mode of TA SEEK/MASK DPI/RETUNE/AUDIO DSP/LOUDNESS/ESP/BEEP/SEEK/STEREO/LOCAL/ VOL LAST.

4. PRESET STATIONS (1,2,3,4,5,6)
(A) RADIO MODE:
When pressed short, these keys select a preset station directly. When pressed longer than 1 sec., current station is stored in preset memory bank. When PTY mode is selected, the PTY switch is shared as follows:

PTY music group ---- PTY speech group ---- OFF

MUSIC	**SPEECH**
1. POP M, ROCK M	1. NEWS, AFFAIRS, INFO
2. EASY M, LIGHT M	2. SPORT, EDUCATE, DRAMA
3. CLASSICS, OTHER M	3. CULTURE, SCIENCE, VARIED
4. JAZZ, COUNTRY	4. WEATHER, FINANCE, CHILDREN
5. MATION M, OLDIES	5. SOCIAL, RELIGION, PHONEIN
6. FOLK M	6. TRAVEL, LEISURE, DOCUMENT

(B) CD/MP3 PLAYER MODE:
1. PAUSE 2. INTRO 3. REPEAT 4. RANDOM

USING THE RDS FUNCTION
What is RDS?
The RDS (Radio Data System) is a digital information system developed by the EBU (European Broadcast Union). Piggy-backed on normal FM broadcasts, RDS offers a variety of information services and automatic retuning functions for RDS-compatible car stereos.
In 1988, RDS became available in the United Kingdom, France, West Germany, Ireland and Sweden. Test transmissions are being conducted in many other european countries. It is expected that RDS will be available in most western european countries in the near future.

5. 'AF' function (ALTERNATIVE FREQUENCIES)
When pressed short, AF switching mode is selected.
When AF switching mode is selected, the radio check the signal strength of the AF all the time. When pressed long, it is activated as regional mode ON/OFF.
– Regional mode ON:
AF switching or PI SEEK is implemented to the station which have all PI codes are same as current station. REG segment is turned on, in LCD display.
– Regional mode OFF
The regional code in the format of PI code is ignored when AF switching or PI SEEK is implemented.

6. 'TA' function (TRAFFIC ANNOUNCEMENT)
When pressed short, it is activated as TA mode on or off
When TA mode is on and traffic announcement is transmitted.
– When the unit is it CD/MP3 mode, it will switch to radiomode temporarily.
– If the volume level was under the threshold point, it will be raised to the threshold point.
– When TP station is received, TP segment is turned on in LCD display.

7. 'PTY' function (PROGRAM TYPE)

PTY MUSIC ---- PTY SPEECH ---- PTY OFF

While selecting PTY type, its selection is implemented by preset buttons as described in preset key. When PTY is selected, the radio starts to search corresponding PTY information, and stops if the corresponding PTY information is detected.

8. DISPLAY (DISP)

When this key is pressed, it is operated as the conversion of each display mode as follow.

1) In case of receiving RDS station.

RADIO MODE

PS ---- CT ---- FREQ ---- PTY

CD/MP3 PLAYER MODE

CDP ---- CT ---- PS ---- FREQ ---- PTY

2) In case of receiving NON RDS station

RADIO MODE

CLOCK ---- FREQ ---- NO PTY

CD/MP3 PLAYER MODE

CDP ---- CT ----FREQ ---- NO PTY

9. MODE BUTTON (MD)

By pressing this key, user can select.

RADIO, CD/MP3 PLAYER or Line In mode.

10. BAND (BND)

Each band is toggled cyclically by pressing this key FM1---FM2---FM3.

11. AUTOMATIC OR MANUAL TUNING (FREQ UP ⏭ OR FREQ DOWN ⏮)

(A) RADIO MODE

When pressed short, these keys are operated as manual tuning mode.

When pressed longer than 1 sec., they are operated as seek tuning mode.

(B) CD/MP3 PLAYER MODE

When pressed short, they are operated as TRACK UP or TRACK DOWN mode.

When pressed longer than 1 sec., they are operated as CUE or REVIEW mode.

12. AUTO SEEK SEARCH TUNING (A/PS)

By pressing shortly, the radio searches for each preset station.

When field strength level is bigger than the threshold level of stop level, the radio is holding at that preset number for 5 sec. with releasing mute, and then searches again.

By pressing longer than 1 sec, and then 6 strongest stations are preset to the corresponding preset number.

When AS operation is finished, the radio executes the preset scan.

13. 'SCAN' AUTOMATIC TUNING CONTROL (SCAN)

This key is operated as RADIO SCAN

The operation is similar as normal search but different thing is holding 5 seconds on every station detected in RADIO SCAN mode.

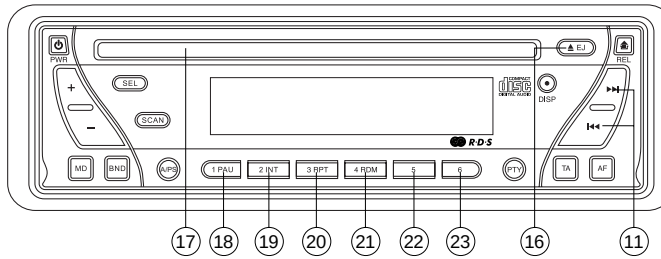
14. PANEL RELEASE BUTTON (⏏)

Press this button and the right-hand part of the panel will be released.

15. LCD DISPLAY

The Liquid Crystal Display will display the current state of the unit.

CD/MP3 CONTROL LOCATION OF PARTS



11. TRACK/SEARCH BUTTON

FORWARD AND REVERSE TRACK SEARCH (or changing songs)

Press the SKIP button (⏮ or ⏭) during play to go to the desired track(song).

⏮ ....REVERSE ⏭ ....FORWARD

Press and hold the SKIP button (⏮ or ⏭) during play to scan the disc at high speed. When the desired music section of the disc is found, release the button. Normal play will resume.

16. CD EJECT BUTTON

Press the EJECT ⏏ button to remove the CD.

17. CD SLOT

18. PAUSE BUTTON

During “PLAY”, press **(18) PAU** button to “PAUSE”. Press it again to resume play.

19. INTRO BUTTON (Preview all Tracks)

Press this switch less than 1 sec. 'INT ON' indication is displayed and the 10 first seconds of each track of the disc are played in normal progression. If you wish to cancel INTRO mode on selected track, press **'INT'** and play of the selected track starts 'INT ON' disappears from display.

20. REPEAT BUTTON 'RPT'

When you press **‘RPT’** button 'RPT ON' indication is displayed. Play of the selected track will be continually repeated until the Track Repeat mode is cancelled by pressing **‘RPT’** button (20) 'RPT' disappears.

21.RANDOM BUTTON 'RDM'

When you press **‘RDM’** button (21). 'RDM ON' indication is displayed and each track of the disc in play are played in a random instead of normal progression. To cancel RANDOM mode, press **‘RDM’** button (21) again.

22, 23. 10 TRACK UP/DOWN SELECT: (In case of MP3 files)

M5: 10 Track down / M6: 10 Track up

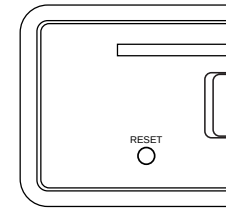
HOW TO SELECT MP3 FILES

1. **Searching Track:**
   - ¥ Press A/PS , then searching track is activated.
   - ¥ Press SEL , then the first digit is blinking.
   - ¥ With VOL+ / VOL- knob, select first digit you want.
   - ¥ Press SEL , then the first digit is fixed and second digit is blinking.
   - ¥ With VOL+ / VOL- knob, select 2 nd 3 rd respectively.
   - ¥ Then automatically the song you selected will start.
2. **Searching File Name:**
   - ¥ Press A/PS twice, then file search is activated.
   - ¥ Press SEL , then the first directory is displayed.
   - ¥ With VOL+ / VOL- knob, you can select the directory you want.

¥ Press SEL again, then the directory is fixed and the first file name is displayed.
¥ With VOL+ / VOL- knob, you can select the file you want.
¥ Press SEL , then the song you selected will start.

3. **Searching Character:**
¥ Press A/PS 3 times, then character search mode is activated.
¥ Press enter SEL button, then A character is displayed.
¥ With VOL+ / VOL- knob, you can select the letter you want.
¥ Press enter SEL key longer than 2 sec.
¥ The song which has same character you selected is displayed.
¥ With VOL+ / VOL- knob, you can select the song you want.
¥ Press enter SEL key, then the song you selected will start.

- **RESET**
  Reset button is placed on the housing.
  The reset button is to be activated for the following reason:
- Initial installation of the unit when all wiring is completed.
- All the function button do not operate.
- Error symbol on the display.



TECHNICAL SPECIFICATIONS

CD/MP3 PLAYER SECTION

Signal to Noise Ratio	> 60dB
Channel Separation	> 50 dB (1kHz)
Frequency Response	20Hz - 20 kHz

TUNER (FM)

Frequency range	87.5-108 MHz
Intermediate frequency	10.7 MHz
Sensitivity	2.8 μV
Stereo separation	30 dB
Signal to noise ratio	50 dB
Channel step	50 kHz

LINE-OUT

Output	350mV
Impedance	10kOhm

GENERAL

Power Supply	13.8V DC (10.8-15.6V allowable)
Speaker impedance	4 or 8 ohm
Output power	40W x 4CH

Note: Specification and the design are subject to possible modification without notice due to improvements.

Instructions on environment protection
Do not dispose of this product in the usual household garbage at the end of its lifecycle; hand it over at a collection point for the recycling of electrical and electronic appliances. The symbol on the product, the instructions for use or the packing will inform about the methods for disposal.
The materials are recyclable as mentioned in this marking. By recycling, material recycling or other forms of re-utilization of old appliances, you are making an important contribution to protect our environment.
Please inquire at the community administration for the authorized disposal location.

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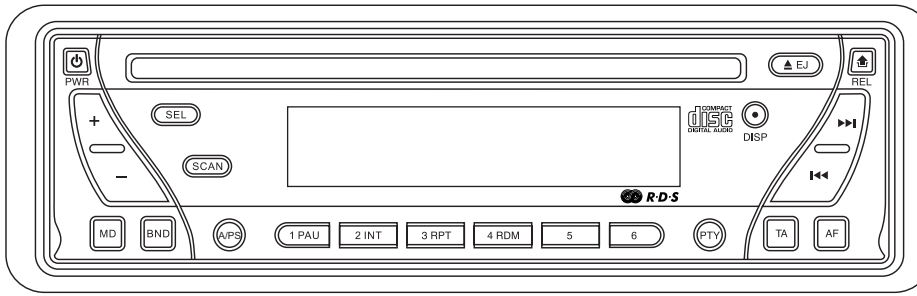
CAD-350



INSTRUCTION MANUAL

CAR STEREO CD/CDR/CDRW/MP3 PLAYER
WITH PLL FM STEREO RADIO
RDS
DETACHABLE FRONT PANEL